H2East Pipeline
Humber to
Nottinghamshire

H2East Pipeline: Humber to Nottinghamshire

Powering Industry

Stage one consultation brochure

March 2026

Cadent
Your Gas Network

Contents

Introducing H2East Pipeline: Humber to Nottinghamshire

The H2East Pipeline: Humber to Nottinghamshire (the Project) is a proposal by Cadent to construct, operate and maintain an underground hydrogen pipeline.

Cadent is the UK's largest gas distribution network, bringing gas to 11 million homes and businesses throughout the North West, West Midlands, East Midlands, East of England, South Yorkshire and North London. Cadent safely manages more than 82,000 miles of underground pipelines.

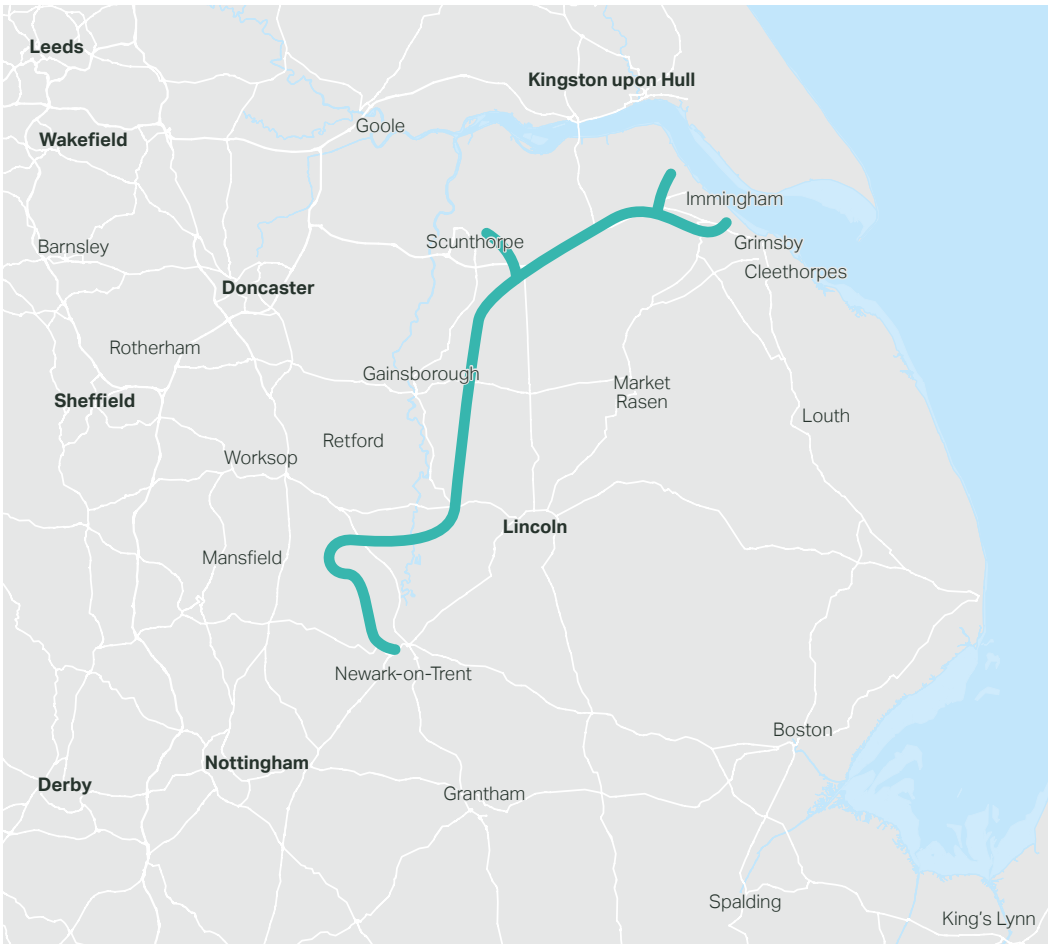
The H2East Pipeline: Humber to Nottinghamshire will transport hydrogen to industries across the region. It is expected to be approximately 150km or 93 miles in length. It will include Hydrogen Above Ground Installations (HAGIs) at certain points along the route to help control and operate the pipeline.

The Project will play a vital role in protecting and boosting local jobs, encouraging inward investment, enabling a route to market for hydrogen producers and decarbonising industry. The pipeline will power industry, supporting manufacturers of steel, chemicals, bricks, food and more to switch from natural gas to low-carbon hydrogen.

The Project we are consulting on – the H2East Pipeline: Humber to Nottinghamshire – is being developed by Cadent and is the first phase of Cadent's wider H2East pipeline programme. It is a subset of East Coast Hydrogen, a collaboration between Cadent, National Gas and Northern Gas Networks to connect planned hydrogen production and storage with industrial hydrogen users in the region.

Cadent is supported by a professional project team who will provide specific support and expertise throughout the consenting stages of the Development Consent Order (DCO) process.

We are now asking people for their views on Cadent's H2East Pipeline: Humber to Nottinghamshire proposals and the route corridor below.



H2East Pipeline: Humber to Nottinghamshire – proposed route

A more detailed route corridor map is provided later in this brochure.

Potential hydrogen industrial users and producers

The underground hydrogen pipeline will play a crucial role in supporting regional industry by enabling a transition for industrial sites that currently rely on natural gas, connecting them directly to a supply of low-carbon hydrogen.

The pipeline is planned to connect to hydrogen production plants at North Killingholme and High Marnham and distribute the hydrogen to potential hydrogen industrial users located near Immingham, Scunthorpe, Kirton and Newark.

To identify potential hydrogen industrial users, we engaged with current industrial customers to understand hydrogen demand and timescales for transitioning to hydrogen. This informed the identification of the potential hydrogen industrial users listed below:

- British Sugar
- British Steel
- Forterra
- Heidelberg Materials
- Knauf
- Lenzing
- Singleton Birch
- Tayto
- Tronox

The potential producers of hydrogen were identified by considering clusters of hydrogen demand centres across Cadent's East Midlands distribution area. We then engaged with the identified hydrogen production sites which were in this area and could be connected to the pipeline. The hydrogen producers are proposed to be:

- HyMarnham Power's Hydrogen Production plant near Newark, currently in construction.
- Uniper's Hydrogen Production Plant in North Killingholme, which has applied for planning permission under the Town and Country Planning Act in 2025.

Questions and answers

Q	A
What is low carbon hydrogen?	Low carbon hydrogen is the type of hydrogen that will be transported by the H_2East Pipeline: Humber to Nottinghamshire Project. There are many different ways of making low carbon hydrogen. This includes creating green hydrogen which is produced by the electrolysis of water powered by renewable energy and blue hydrogen which is produced by splitting natural gas. The carbon dioxide created by this process is then captured and stored. The UK Government's Low Carbon Hydrogen Standard sets a maximum threshold for the amount of greenhouse gas emissions allowed in the production process for hydrogen to be considered 'low carbon'.
What is a potential hydrogen industrial user?	A potential hydrogen industrial user is an organisation that is expected to use hydrogen supplied by the pipeline, such as steel, chemical and food producers.
What is a Hydrogen Production Plant?	A facility that produces hydrogen gas for use as a fuel.

Q	A
What is a strategic option?	Strategic options are used to establish an outline route for the Project before moving into route corridor development. This early-stage work focuses on identifying broad corridors connecting hydrogen production sites with major industrial demand areas. Different strategic options were evaluated to identify a preferred option within which a broad set of route corridors were identified.
What is a route corridor?	The route corridor represents the area currently being considered for the underground hydrogen pipeline. At this stage, it is a wide area to support the assessment of potential pipeline route options and which we aim to be able to reduce in size following discussions with landowners, community and stakeholder feedback and technical assessments. The pipeline is currently expected to have a diameter ranging between 4 and 42 inches, depending on its function and a construction corridor of up to 50 metres. Environmental surveys are being undertaken within the route corridor to inform our understanding of local conditions and ensure that potential impacts are identified and assessed.
How are route corridors identified?	The identification of route corridor options uses a detailed approach that considers a range of engineering and environmental factors. The approach focuses on defining corridors wide enough for alternative pipeline alignments within them, allowing for adjustments in the route depending on local characteristics. The process for defining route corridors uses an evaluation process based on a standard industry approach to test each corridor and determine the preferred route corridor to take forward.
What is a Hydrogen Above Ground Installation?	A Hydrogen Above Ground Installation or HAGI is a site which contains equipment that supports the operation of a hydrogen pipeline network. The equipment allows the operation, monitoring, maintenance and inspection of the pipeline network to take place.
What is a Block Valve Installation (BVI)?	BVIs are a type of above ground installation, usually smaller than HAGIs. BVIs act as a cut-off point to isolate a section of pipeline for maintenance, repair or safety reasons.
What is a pipeline spur?	Pipeline spurs provide connections to the potential hydrogen industrial users and are typically smaller in diameter than the main pipeline.

Opportunities for the region

The region has a long history of generating energy from its coal and gas fired power stations, and is known locally as 'Megawatt Valley'. With the coal fired power stations closed, low carbon hydrogen can have a future central role in the UK's energy mix – fuelling industries across the region.

The Project will lay the foundation for hydrogen use across the region, connecting major energy-intensive industries from the Humber to Nottinghamshire. It will create a catalyst for the UK's future hydrogen economy, supporting a cleaner and more prosperous future for generations to come.

The Project will enable manufacturers of steel, chemicals, bricks, food and more to switch from natural gas, which mainly comprises of methane, to low-carbon hydrogen, keeping British industry alive and supporting industrial decarbonisation.

The Project will play a vital role in:

- **Safeguarding British manufacturing**
- **Encouraging inward investment**
- **Decarbonising energy-intensive industries**
- **Job retention across Humber, Lincolnshire and Nottinghamshire**
- **Supporting the development of new skills in the hydrogen sector**
- **Enabling future expansion of the hydrogen network to reach more industrial sites**

Reducing Emissions

The UK Government has committed to net zero carbon emissions by 2050. This supports hydrogen's future role in the UK's energy mix as it moves from an energy system that is heavily reliant on fossil fuels to a future system that has a large mix of energy technologies, such as renewables, nuclear, green gases, hydrogen and carbon capture, storage and utilisation.

"Hydrogen offers a viable route to decarbonise sectors that can't easily electrify, and this pipeline will be a vital piece of national infrastructure to make that possible. We're continuing to work closely with industrial users, hydrogen producers and local stakeholders to ensure this Project supports both economic growth and the UK's net zero ambitions."

Adam Knight, H2East Pipeline: Humber to Nottinghamshire Project Director at Cadent.

Find out more at
www. h2east.co.uk

The technology

What is hydrogen?

Hydrogen is a gas which can be used for heat, power and even fuel for large vehicles like HGVs. When it's burned, no carbon emissions are released. Hydrogen holds a lot of energy so it's great for transporting large amounts of energy to where it's needed.

Hydrogen at the scale required has to be made either through electrolysis or through the reformation of methane. Both methods can be used in a way that keeps carbon emissions to a minimum.

Why hydrogen?

Hydrogen is a great fuel for industry, it can deliver high grade heat to meet industrial energy demands. Electricity cannot easily do this in all applications, without a significant increase in infrastructure, meaning that hydrogen is needed in our energy mix to keep businesses who rely on gas, operating in the UK for years to come.

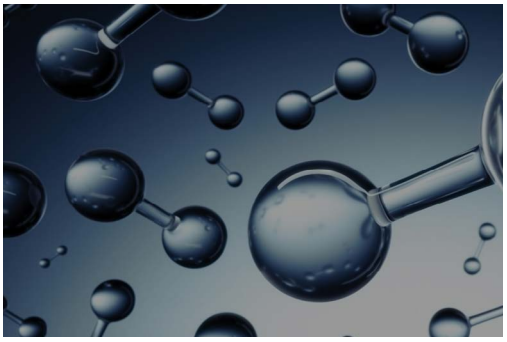
The region has a long and proud history of generating power and heat from fossil fuels (such as coal and natural gas) for industrial and domestic use. However, the use of fossil fuels produces carbon dioxide, a greenhouse gas that contributes to climate change. Hydrogen offers a clean alternative source of fuel that doesn't release harmful emissions into the atmosphere.

Hydrogen can also be used across multiple sectors of the economy, which presents an opportunity to reduce carbon emissions across different industries.

How is hydrogen safely managed?

Cadent currently provides over 40,000 industrial sites with natural gas, across most regions of England. The gas sector has been managing the safe delivery of combustible natural gas for around 200 years, and hydrogen was widely used in national and local networks as town gas (a blend of methane, hydrogen and other gases).

Hydrogen use is also being safely managed across the world. There are already many hydrogen pipelines both in operation and development.



- Across Europe there are over 180 hydrogen transmission and 60 hydrogen distribution projects in development, which will total over 50,000 kilometres of pipeline (31,000 miles). [1]
- The United States has approximately (1,600 miles) of active hydrogen pipelines, which is the largest dedicated hydrogen pipeline network in the world. [2]
- There are industrial sites in the UK which transport hydrogen using pipelines.

Cadent will be required to meet criteria set out by the Health and Safety Executive (HSE) before operating any hydrogen pipelines.

1 U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Hydrogen Pipelines, accessed at energy.gov.
2 H2InfraMap, European Hydrogen Infrastructure Map, accessed at h2inframap.eu.

An overview of our proposals

The H_2East Pipeline: Humber to Nottinghamshire is a project proposed by Cadent to construct, operate and maintain an underground hydrogen pipeline.

The underground pipeline will vary in diameter along the route and will travel from the Humber, through Lincolnshire into Nottinghamshire, transporting hydrogen to potential hydrogen industrial users at existing sites.

The majority of our new infrastructure will be underground. However, at certain points along the pipeline, we will need some above ground infrastructure to control, monitor and maintain the new hydrogen underground pipeline. We call these Hydrogen Above Ground Installations (HAGIs).

The pipeline

The pipeline will be underground connecting to hydrogen producers and industrial users. At this first consultation we are presenting a broad route corridor within which the pipeline could be located.

We will consider all comments received during this consultation, alongside further technical work, in the design evolution of the Project. Your feedback will help us investigate pipeline route options and develop a more detailed design ahead of a second consultation on the plans.

What width would the pipeline be?

The main pipeline that makes up the network will include sections of larger diameter pipe, typically up to 42 inches in diameter.

Pipeline spurs link HAGIs, located on the main pipeline, to the potential hydrogen industrial users. They typically are smaller diameter sections of pipeline, between 4 to 16 inches.

Why we aren't using the existing gas network

We looked closely at our existing gas pipelines to see if they could be reused to carry hydrogen. It was considered that the existing pipelines are still required to transport natural gas and are not located in the right place, or of suitable size, to meet future hydrogen needs. Also, because the existing pipelines vary in age, they will reach the end of their service lives at different times. The environmental impacts of piecemeal replacements of pipeline sections could be greater than a totally new pipeline.

Hydrogen Above Ground Installations (HAGIs)

As stated previously, the majority of our pipeline will be underground. However, we will need some hydrogen above ground installations (HAGIs) at certain points along the pipeline. HAGIs are important. They allow us to control the flow and pressure of hydrogen at key points along the pipeline and act as connection points for hydrogen industrial users. They also allow access to the pipeline network to carry out our routine maintenance programme.

We currently anticipate that there will be approximately 25 Hydrogen Above Ground Installations (HAGIs) including Block Valve Installations (BVIs) to control and operate the network at key points along the proposed pipeline.

HAGIs are expected to be located:

- At each of the hydrogen production and industrial user sites to enable connection to the network.
- Where there is a junction in the network, such as where pipeline spurs connecting the industrial users branch away from the main pipeline.
- To facilitate potential future connection to other hydrogen pipeline networks.

The HAGI search areas presented at this consultation identify broad locations where the HAGIs could be located. These areas will be reduced following further technical work and feedback from stakeholders.

The locations of search areas have been informed by the points along the pipeline corridor where spur line connections are required. They have also been identified to avoid built development, key environmental/ planning designations and any other development constraints.

Search areas for HAGIs have been identified within the route corridor. You can see their proposed locations on pages 16-25.

What do HAGIs look like?

The above ground components within HAGIs will be kept at a low level due to the nature of the equipment and to reduce visual impacts.

Permanent infrastructure will typically be approximately up to 4m in height, with the exception of CCTV and lighting masts that could be up to 6m in height.

Other features include:

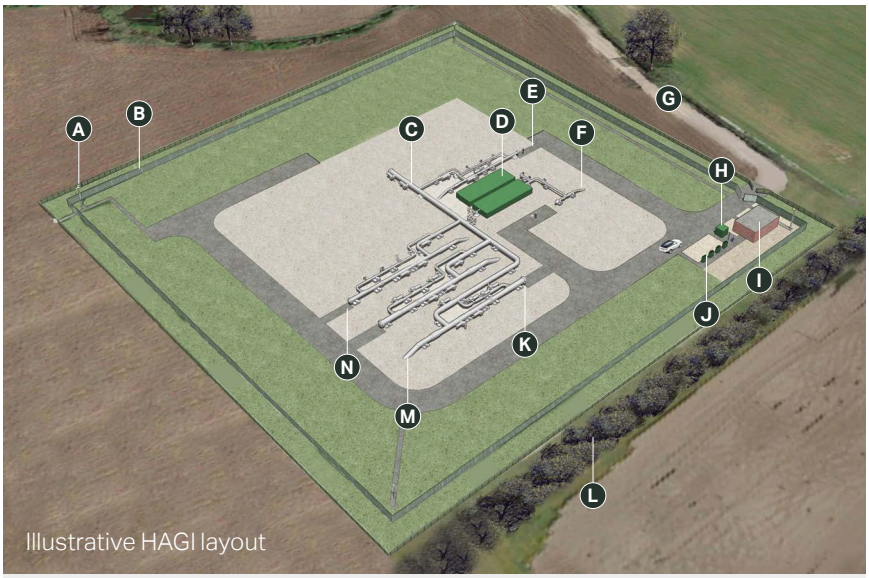
- **Pressure reduction stations** – pipework and valves that control the pressure and flow of gas.
- **Metering facilities** – Metering facilities are required for volume measurements of the hydrogen gas.
- **Pigging facilities** – support in-line inspection and cleaning of the pipeline network. This is undertaken by passing a device known as an in-line inspection tool through the pipeline.
- **Instrumentation kiosks** – house monitoring equipment for flow, pressure and temperature measurements.
- **Block valves** – comprise an isolation valve which can isolate a section of pipeline to limit any loss of gas released in the event of a repair, maintenance or a failure of the pipeline section.
- **Fencing**
- **General telecommunications equipment**
- **Electronic equipment will be included to support operations.**

The equipment will vary on a site-by-site basis, depending on the HAGI's function.

Car parking areas will be provided with the HAGI sites to support maintenance and monitoring activities, but they are not expected to be staffed.

The design of HAGIs will be reviewed and updated as the Project progresses.

Example of equipment used at HAGIs



Illustrative HAGI layout

A. Outer timber post and rail fence
B. Inner metal security fence
C. Above ground piping / headers
D. Pressure reduction skids (design tbc)
E. Inspection facilities
F. Outgoing pipelines
G. Access track
H. Temporary generator
I. Local Equipment Room (LER) includes instrument and control kiosk (design tbc)
J. EV charging points
K. Inspection facilities
L. Hedgerow reinforced with new planting
M. Incoming pipelines
N. Inspection facilities

What are block valve installations (BVIs)?

BVIs act as a cut-off point to isolate a section of pipeline for maintenance, repair or safety reasons. These are smaller than HAGI sites, typically measuring around half a hectare (half a football pitch).

At BVIs there is a small pipe visible above ground, as well as a small instrument and control kiosk and security fencing. Sites will include an access track (or similar) and space for vehicles to turn. A gate will be required for access for maintenance. BVIs will not be permanently staffed.

The development process

The H_2East Pipeline: Humber to Nottinghamshire is anticipated to be a Nationally Significant Infrastructure Project (NSIP).

NSIPs are consented through the Development Consent Order (DCO) process which aligns with the Planning Act 2008.

The Planning Inspectorate will carry out an examination of our proposals and will make a recommendation to the Secretary of State for Energy Security and Net Zero on whether or not to grant consent for our proposals.

Although local planning authorities don't make the final decisions on Nationally Significant Infrastructure Projects, they still play a vital part in the process. The local authorities provide feedback, highlight potential impacts, and share important evidence that supports the Planning Inspectorate's examination.

We anticipate that the development process from start, through DCO submission, examination and then decision will take between four to five years.

Development process

1

Pre-application

Before submitting the DCO application to the Planning Inspectorate, we develop the Project's proposals and undertake an Environmental Impact Assessment (EIA). A key part of this is engagement with stakeholders and consultation with the public.

2

Submission

A DCO application is submitted to the Planning Inspectorate.

3

Acceptance

The Planning Inspectorate has up to 28 days to review the application and decide whether to accept it for examination.

4

Pre-examination (approximately three months)

Following acceptance, the public and stakeholders can register with the Planning Inspectorate as Interested Parties by submitting relevant representations. The Planning Inspectorate will appoint an Examining Authority to evaluate the proposal, and the Interested Parties will be invited to attend a preliminary meeting, chaired by the Examining Authority.

5

Examination (up to six months)

The Examination of the application will include invitations for Interested Parties to elaborate on their views, involving public hearings for a period of a maximum of six months.

6

Recommendation and decision (up to six months)

The Planning Inspectorate will provide a recommendation to the Secretary of State for Energy Security and Net Zero who then has three months to make the final decision on granting the DCO.


TURN RIGHT
BUS STOP
TURN LEFT

How we developed our proposals

The identification of a route corridor for the H_2East Pipeline: Humber to Nottinghamshire began with a review of confirmed and potential hydrogen production sites along with the industries that could benefit from being connected to a supply of hydrogen.

In our early work to develop the route corridor, we identified three production areas across the East Midlands distribution area:

- Immingham, in the Humber area in North Lincolnshire
- High Marnham, in Nottinghamshire
- Ratcliffe, south west of Nottingham.

And the areas where industries could use hydrogen across this region were identified as including:

- North Lincolnshire towns of Immingham, Grimsby and Scunthorpe;
- South Yorkshire towns of Rotherham, Barnsley and the cities of Doncaster and Sheffield;
- The cities of Nottingham, Derby and Leicester; and
- Some more dispersed potential users of hydrogen in Nottinghamshire (e.g. Newark and Mansfield) and Derbyshire (e.g. Chesterfield)

This work to identify hydrogen production and potential usage areas led to the development of four strategic options which were evaluated in detail.

- **Option 1**: Humber to Scunthorpe
- **Option 2**: Humber to South Yorkshire
- **Option 3**: Humber to Nottinghamshire
- **Option 4**: Nottingham, Derby and Leicester

Ultimately, the option from Humber to Nottinghamshire (Option 3) was taken forward and is being consulted on as it connects to high levels of hydrogen demand from industrial users, is located near to hydrogen production and offers better opportunities for future expansion across Cadent's network. This option is also not located near to highly sensitive environmental designations such as international conservation designations.

A route corridor appraisal was then undertaken to move from a single preferred strategic option to a set of broad corridors that could, at a later date, accommodate a potential pipeline. The purpose of this stage is to demonstrate that the preferred strategic option could be delivered in principle within corridor options, while maintaining flexibility for refinement in later stages.

Find out more

You can find out more about the work to develop a route corridor, and the alternatives we considered, in our Design Evolution Report. This is available on our website or by contacting our team (details on the back page).

Environmental considerations

The hydrogen underground pipeline and HAGIs will be designed and constructed to minimise impacts on natural habitats and the environment. This includes looking at a wide range of factors, including ecology and wildlife, the historic environment and existing ground conditions. The project team will be carrying out a number of surveys, site and route investigations, as well as other assessments, to better understand potential environmental issues and impacts.

Some surveys may be required in areas beyond the preferred route corridor and HAGI search areas to gain a better understanding of local habitats and how the Project may impact them. There is no intention of conducting surveys of private homes. Surveys will predominantly take place on open land and we will work with landowners to seek voluntary access.

What you can tell us

We want to know whether you have any views or information about how we plan to address environmental considerations.

Find out more

You can find out more about how we'll consider the environment and the surveys we'll be undertaking in the Project's Scoping Report. This is available on our website or by contacting our team (details on the back page).

Cumulative impacts

We know that alongside our proposed hydrogen pipeline there are other Nationally Significant Infrastructure Projects being proposed in the East of England. Each Project could play a vital role in meeting the UK's long term energy, transport and resilience needs, but we are aware that their combined presence can place pressure on local communities, landscapes and existing infrastructure.

We will engage early with local authorities, statutory bodies, and neighbouring project teams to gain their insight into cumulative impacts and understand what we can do to minimise them.

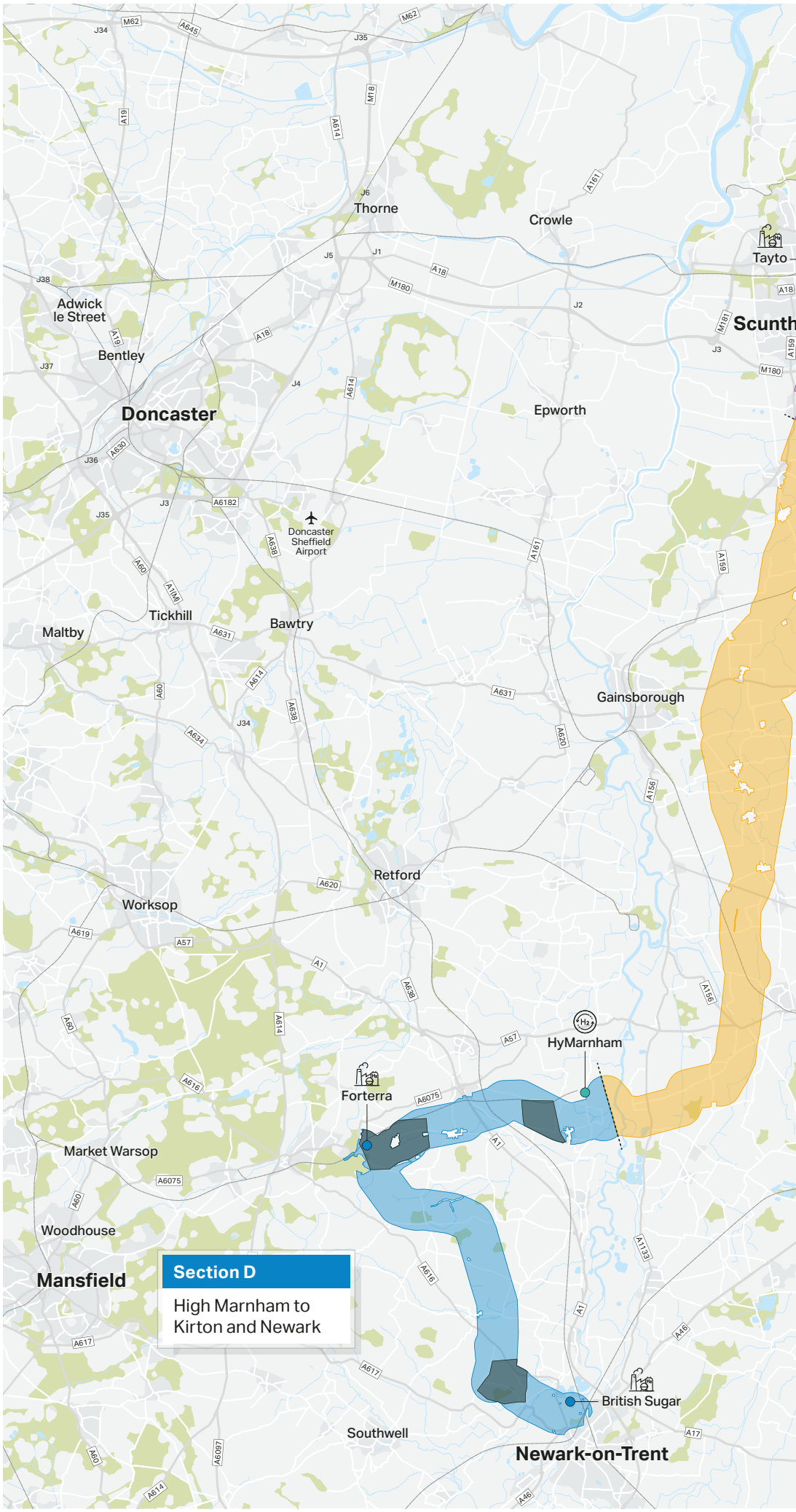
Overview map

This map shows an overview of the proposals which are the focus of our consultation. We have identified a route corridor, within which our underground pipeline could be constructed.

At this stage the route corridor is a wide area to provide us with flexibility to investigate potential pipeline route options. The pipeline is expected to have a diameter which ranges between 4 and 42 inches, depending on its function, and a construction corridor of up to 50 metres.

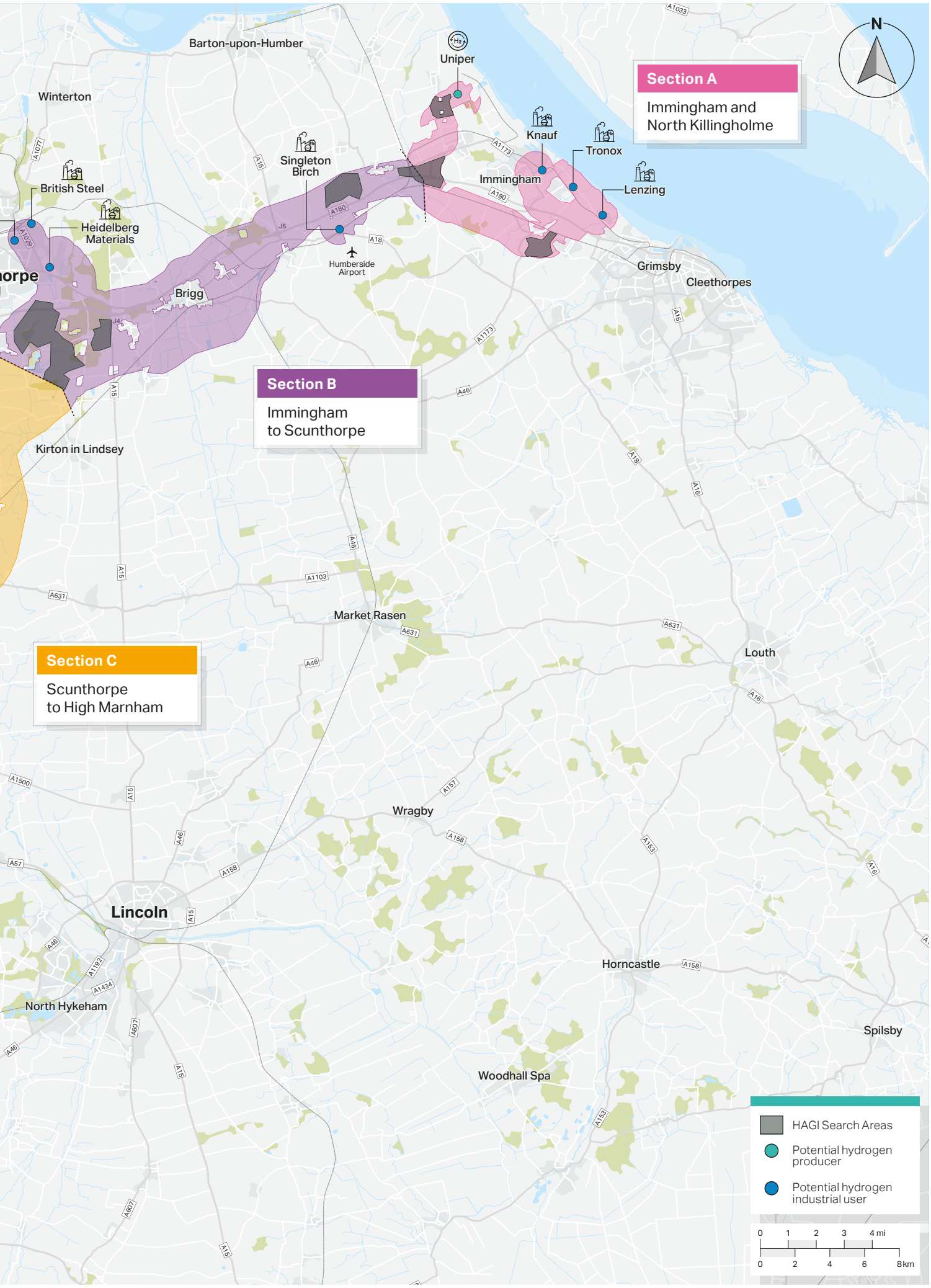
This route corridor is based on preliminary desk-based assessments and some initial site visits. For the above ground infrastructure, we have identified search areas within which our HAGIs could be sited.

To help explain the proposals, we've split the route corridor into four sections – **Section A, B, C and D**. Over the next few pages, you can see each section of the route corridor in more detail.



Find out more

To explore this map in greater detail, visit our website at **www.h2east.co.uk**, where you'll find an interactive, postcode searchable version that allows you to zoom in on specific areas.



The route corridor
Section A: Immingham and North Killingholme

This section includes a connection to a Hydrogen Production Plant located to the north of the Total Lindsey Oil Refinery site near North Killingholme. A HAGI may be required, located at a planned hydrogen production plant to the north of North Killingholme.

A single main pipeline would run southwards between North Killingholme airport and the refinery. A further HAGI is proposed to be located between Ulceby and Habrough to connect with a westbound main pipeline towards Scunthorpe and a main pipeline connecting the potential hydrogen industrial users located to the south east of Immingham.

A HAGI is proposed to be located in the area around Stallingborough and Healing from which pipeline spurs branch off to connect potential hydrogen industrial users located to the south east of Immingham. A further HAGI may be required to the north east, from which pipeline spurs can branch off. HAGIs will be required within the hydrogen producer and industrial user sites.

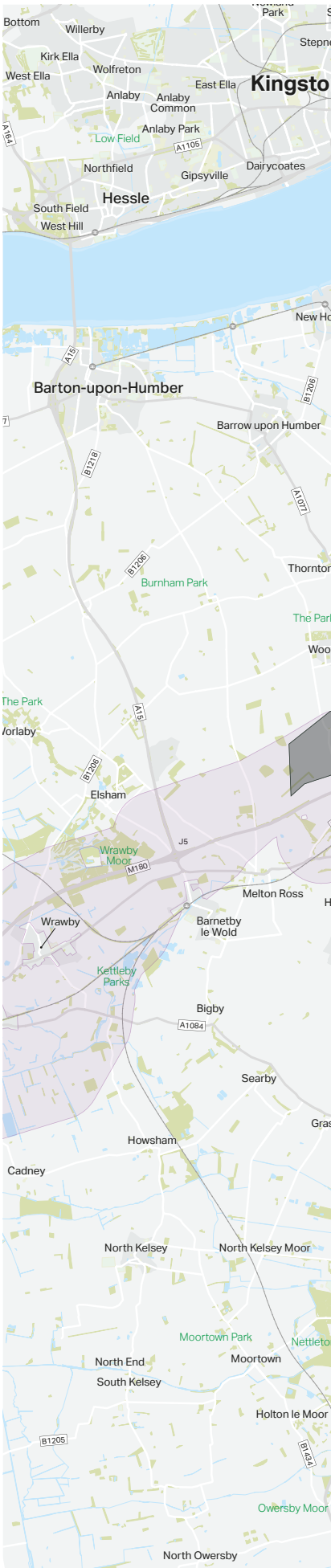
The potential hydrogen industrial users in Section A are Knauf, Lenzing and Tronox. HAGIs will also be located within the premises of industrial users.

Section A in numbers

Approximately 14km of main pipeline

13km of pipeline spurs

Eight HAGIs.

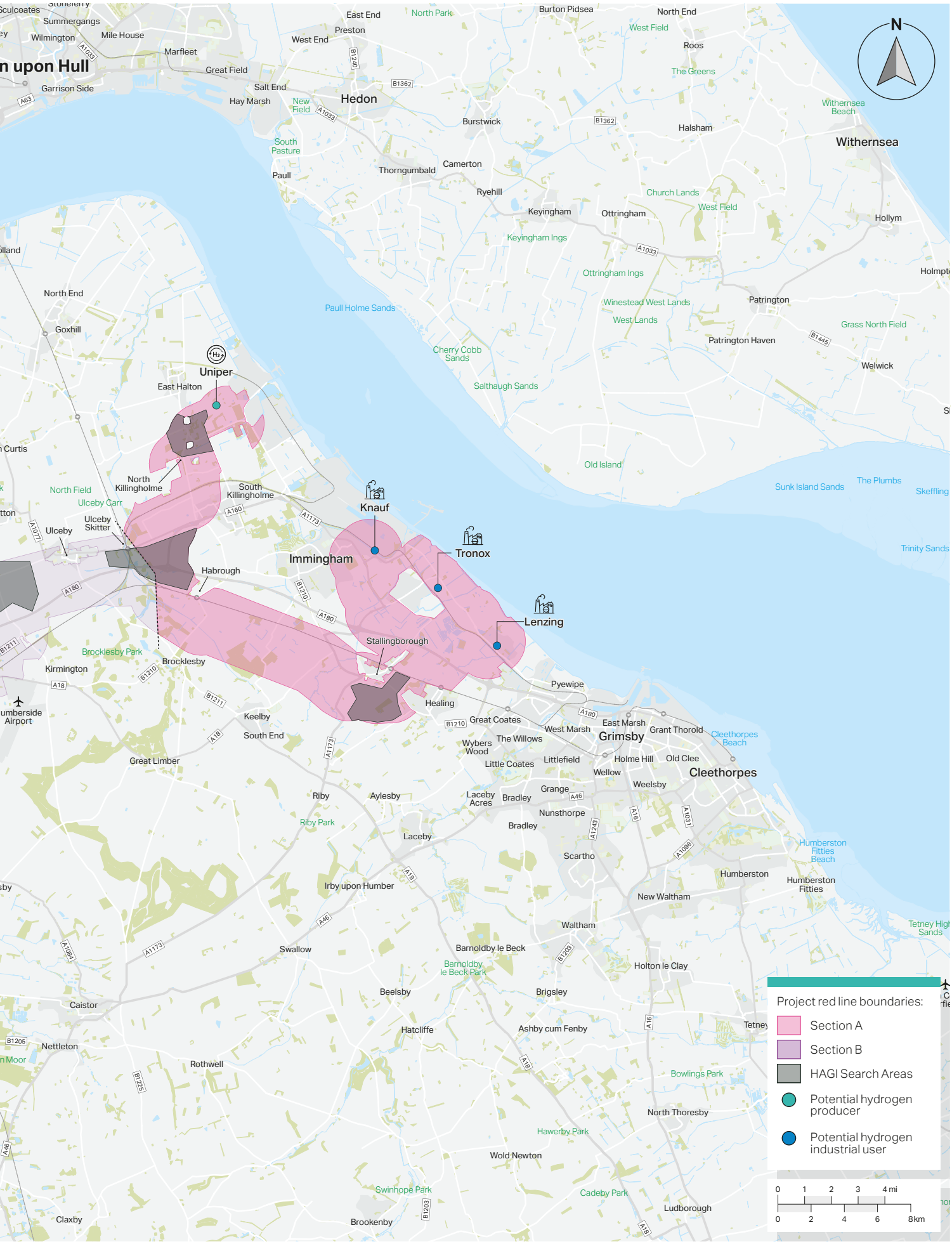


Find out more and submit feedback

Visit the project website: **www.h2east.co.uk**

Attend an in-person event. See page 33 for details

Send an email to: **humbertonotts@h2east.co.uk**



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(Lines are open 9am to 5pm)

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The route corridor Section B: Immingham to Scunthorpe

This section would connect the HAGI located between Ulceby and Habrough to Scunthorpe with the preferred route corridor broadly following the M180 motorway.

A HAGI and pipeline spur is required to connect to the Singleton Birch potential hydrogen industrial user that is located near Humberside Airport. The main pipeline is planned to cross the M180 in places via trenchless crossings to reduce impacts to the road network.

You can read more about trenchless crossings on pages 26 to 29 – **How we would construct the Project.**

There are two options in Section B.

One option is to stay north of the M180, running to the north of Brigg and Scawby, or alternatively to stay south of the M180. A more northerly option would pass through an area of woodland to the south east of Scunthorpe but would avoid multiple crossings of the M180 and provide a shorter pipeline length.

A pipeline route to the south of the M180, Brigg and Scawby could avoid areas of woodland but would result in a longer pipeline route and would have more crossings of the M180. The route corridor widens as it approaches the south of Scunthorpe to accommodate these options.

A HAGI will need to be located to the south of Scunthorpe, from which pipeline spurs will connect potential hydrogen industrial users located on the eastern side of the town.

The potential hydrogen industrial users in Section B would be British Steel, Heidelberg Materials, Singleton Birch and Tayto.

The length of the main pipeline between Immingham and Scunthorpe (approximately 26km), requires a BVI containing isolating values located along the route. The precise location of this BVI will be determined through further design work. HAGIs will also be required within the industrial user sites.

Section B in numbers

Approximately 26km of main pipeline

22 km of pipeline spurs

Nine HAGIs.

Find out more and submit feedback

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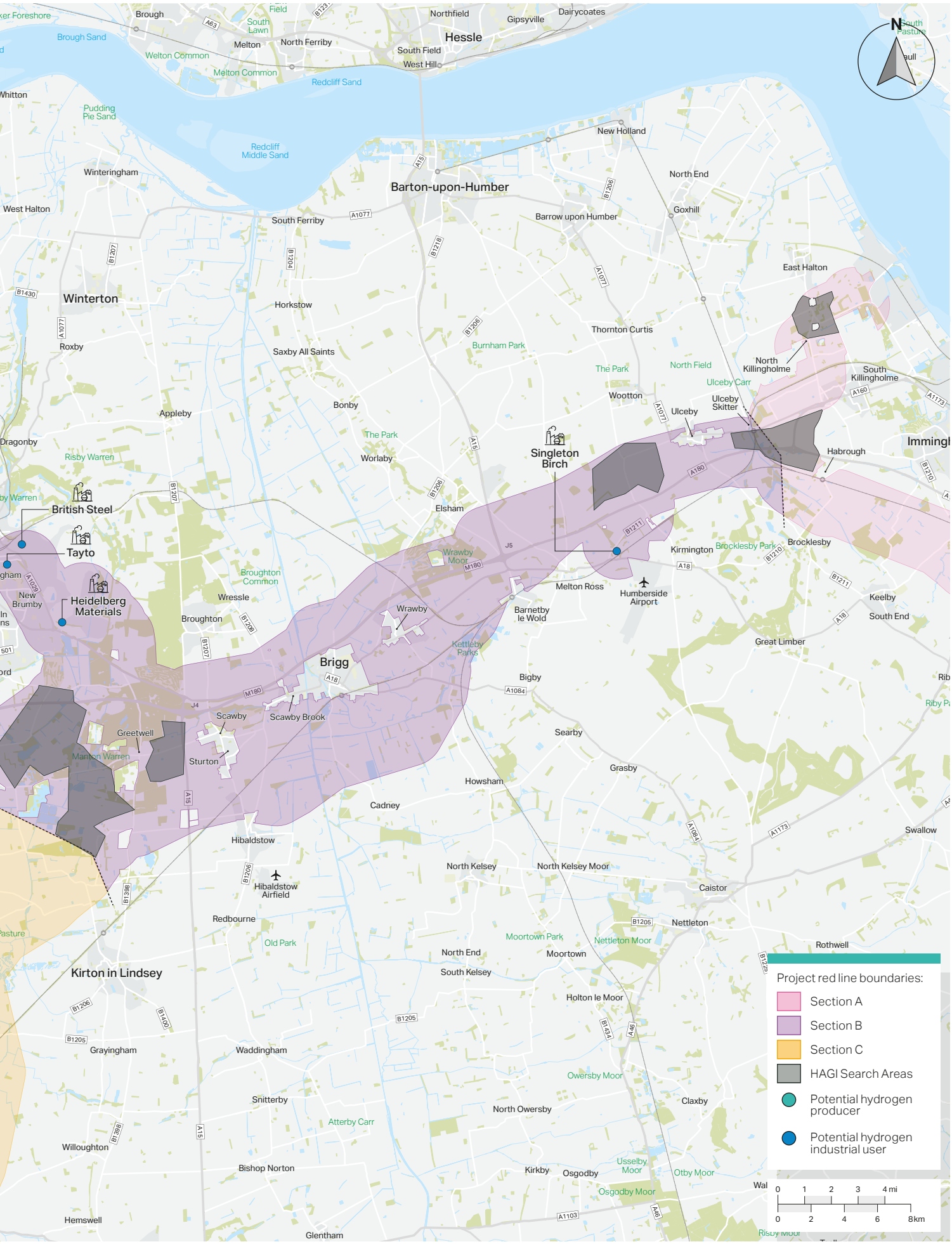

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The route corridor Section C: Scunthorpe to High Marnham

From the HAGI search area located to the south of Scunthorpe, the preferred route corridor would continue southwards towards High Marnham, passing to the east of Scotter and west of Kirton in Lindsey.

The preferred route corridor is then proposed to continue southwards passing approximately 2km to the east of Gainsborough and past the villages of Corringham, Heapham, Upton, Kexby and Willingham by Stow. The preferred route corridor turns westwards to the south west of Saxilby passing to the south of Newton on Trent before crossing the River Trent and connecting to a Hydrogen Production Plant located to the north of the village of High Marnham.

The length of main pipeline between Scunthorpe and High Marnham (approximately 40km), requires additional BVIs containing isolating values at intervals along the route. The precise location of these will be determined through further design work. HAGIs will be required at the High Marnham site.

Section C in numbers

Approximately 40km of main pipeline

Four HAGIs.

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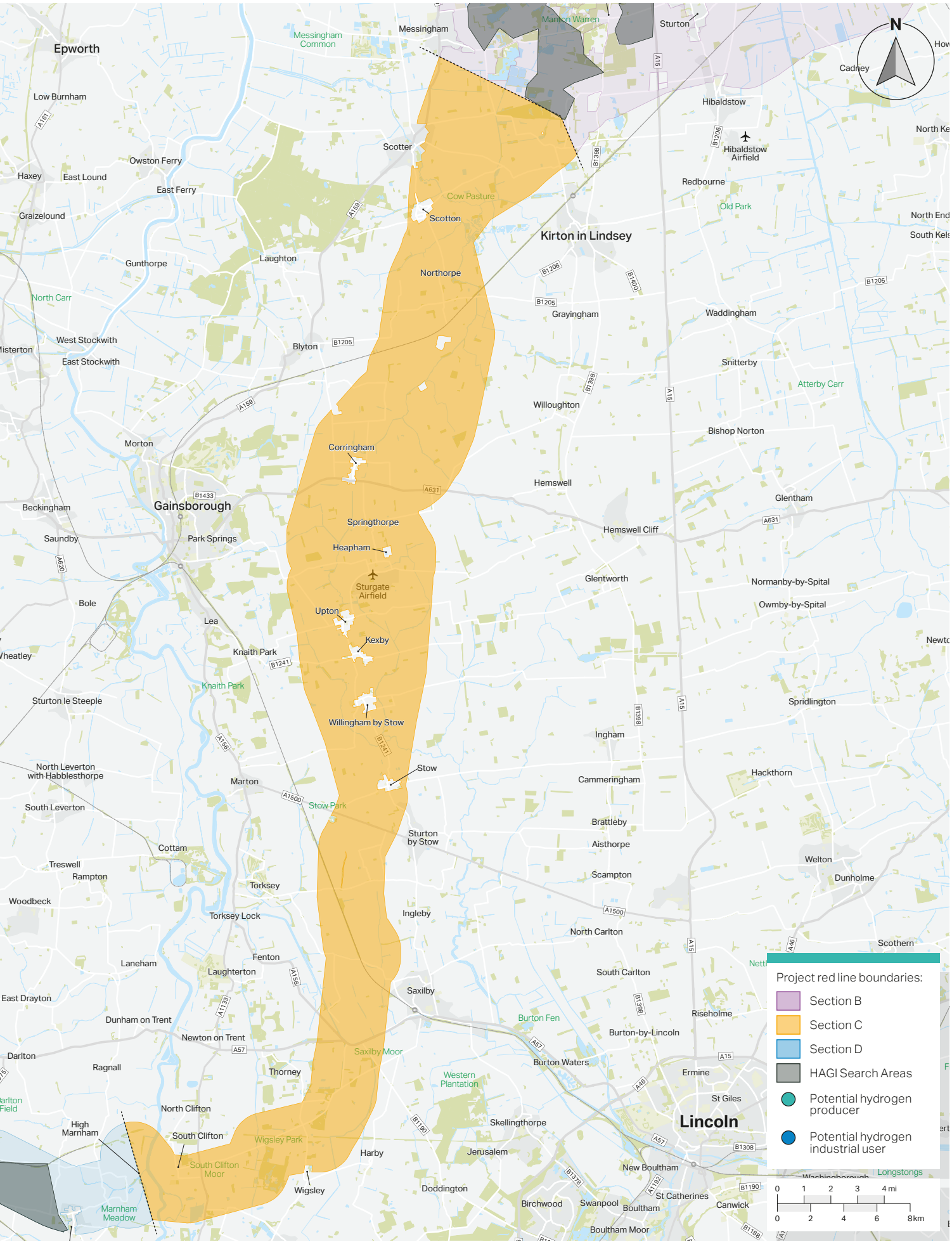

Call us on: **0800 188 4479**
(Lines are open 9am to 5pm)

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The route corridor Section D: High Marnham to Kirton and Newark

Section D connects the HyMarnham Hydrogen Production Plant to potential hydrogen industrial users at Kirton and Newark.

The preferred route corridor is proposed to extend westwards from High Marnham, passing to the north of Normanton on Trent and Egmanton with a HAGI required to provide a pipeline spur to the Forterra site at Kirton.

From this location the main pipeline preferred route corridor heads in a south easterly direction passing between Caunton and Norwell to connect to a HAGI located to the north west of Newark. From here a pipeline spur could connect to British Sugar. HAGIs would be required within the two industrial user sites.

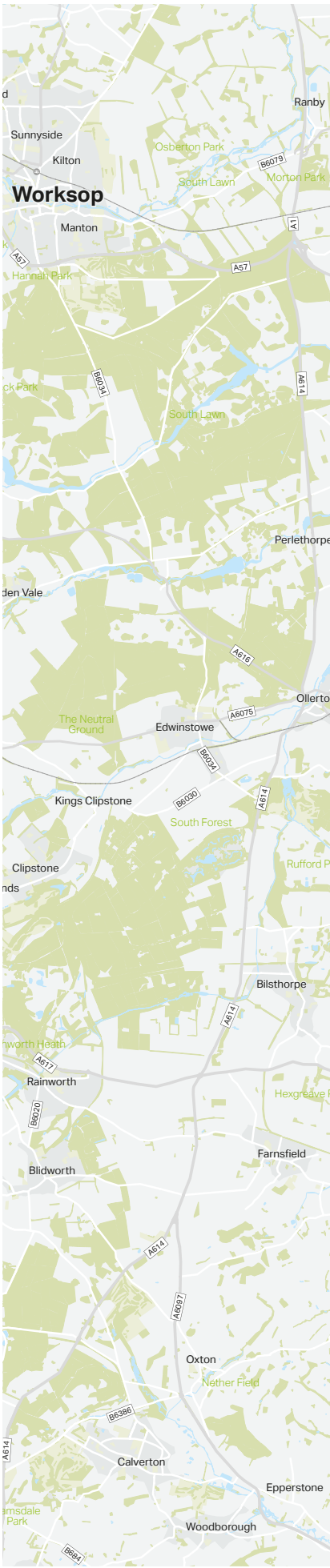
The potential hydrogen users in this section are Forterra and British Sugar.

Section D in numbers

Approximately 28km of main pipeline

Six km of pipeline spurs

Four HAGIs.



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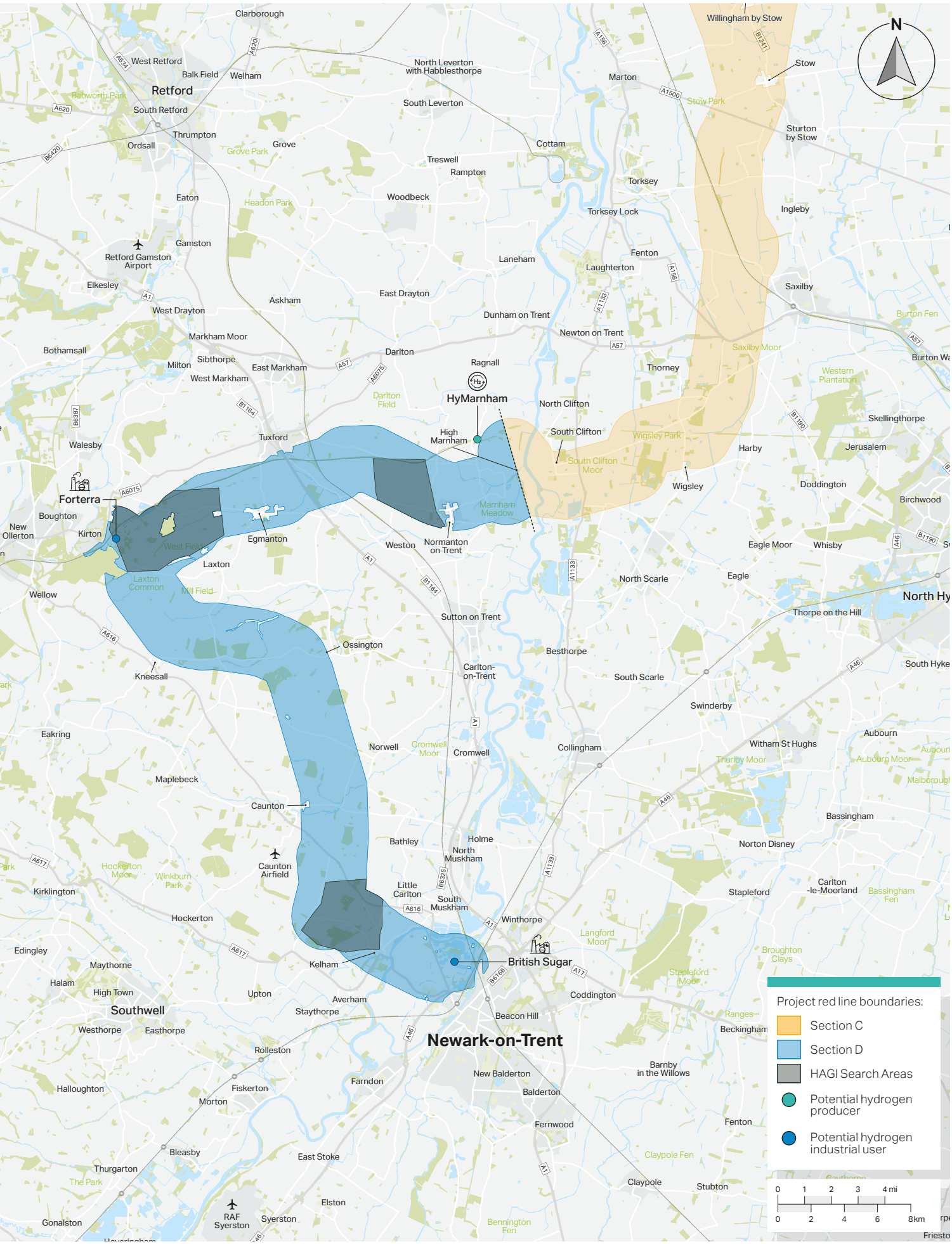
Attend an in-person event. See page 33 for details

Send an email to: **humbertonotts@h2east.co.uk**



Call us on: **0800 188 4479**
(Lines are open 9am to 5pm)

Write to us: **FREEPOST H2 EAST HN**

How we would construct the Project

Cadent is an experienced and trusted operator of gas pipelines. We will bring our extensive expertise of constructing, operating and maintaining the existing gas network to this Project.

The pipeline would be constructed predominantly using open trench techniques. Where it is not possible or practical to use open trench pipeline construction, trenchless crossing techniques will be used to cross existing infrastructure like roads, railways and waterways.

Once the Project has been constructed, the pipeline will be buried underground. Only the above ground infrastructure will remain visible, at certain points along the route.

Over the next pages we have provided an overview of open trenching and trenchless construction methods.

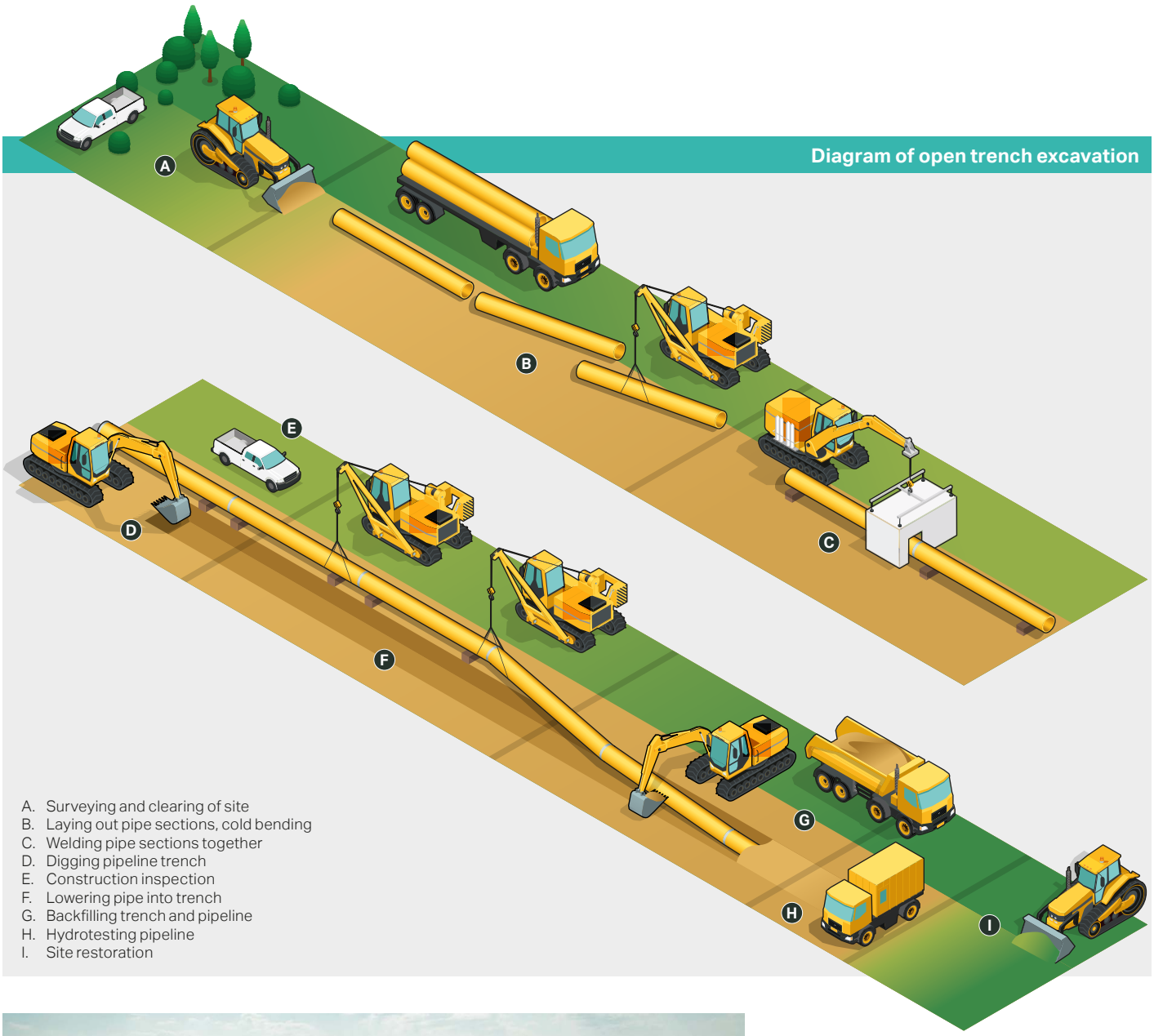
Open trenching

Open trench (or 'open cut') excavation is the most common method for installing underground pipelines, cables or other below ground infrastructure.

- Open trenching begins by marking out the total area within which construction work will take place.
- The area is surveyed and the appropriate environmental mitigations are installed around the working area to protect water ways, important environmental receptors and areas which require mitigations in how we construct the pipeline or HAGI.
- Topsoil is then carefully stripped and stored next to the pipeline route so it can be maintained. Meanwhile, the pipeline's individual pipes are delivered in short lengths and placed on temporary supports. These short lengths of pipeline are welded together into longer sections called 'strings'.
- Testing is completed on each weld and a full inspection report produced before the welds are coated.
- The pipeline trench is then dug, with excavated material stored separately from the already stripped topsoil.
- The pipeline 'strings' are then lowered into the trench using special vehicles called 'side booms' (pictured) or excavators and welded to the pipeline that's already been laid.
- The trench is backfilled using the previously excavated material and the topsoil is replaced.
- The pipeline is then hydrotested (filled with water) to prove it is fit for operation. Rigorous checks are then undertaken prior to the pipeline being commissioned once the entire section is complete.
- Once the land above the pipeline has been fully reinstated it can be returned, as far as possible, to its previous use. We anticipate that open trenching will be the predominant technique we use to construct our underground pipeline.
- A short time after reinstatement it will not be possible to see where the pipeline was constructed, apart from pipeline marker posts installed at fence lines and boundaries to identify its presence.

We will build the pipeline in stages and our construction activities are likely to move around, which means we won't be working across the whole development area for the entire construction period it will take time to build the pipeline. Once the Project has been constructed, the pipeline will be buried underground. Only the above ground infrastructure (HAGIs and BVIs) will remain visible.

Diagram of open trench excavation



A. Surveying and clearing of site
B. Laying out pipe sections, cold bending
C. Welding pipe sections together
D. Digging pipeline trench
E. Construction inspection
F. Lowering pipe into trench
G. Backfilling trench and pipeline
H. Hydrotesting pipeline
I. Site restoration

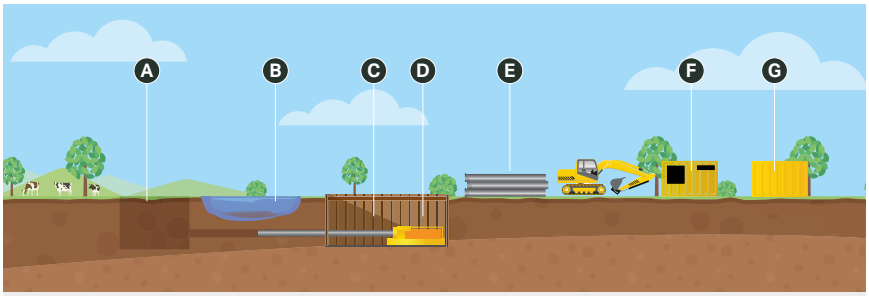
Trenchless methods (for roads, rivers, other utilities, and rail)

In some cases, for engineering and environmental reasons, open trench methods are not viable so trenchless methods will be considered.

We'll need to use trenchless methods at various points along the pipeline route.

Auger boring

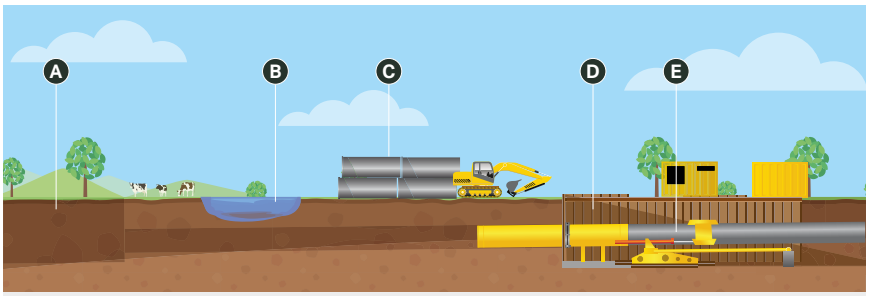
Auger boring can either be 'cased' or 'uncased'. For cased auger boring, steel or concrete pipe sections are pushed along the crossing section and material is removed by the auger drill inserted into the pipe. Following installation of the casing pipe, the hydrogen pipe is inserted with insulators to insulate and centralise the pipe in the casing. For uncased auger boring the hydrogen pipe is inserted directly into the ground with no casing.



A. Reception pit
B. Watercourse (or road, rail crossing etc.)
C. Entry pit
D. Auger bore
E. Material storage
F. Site cabin
G. Site storage

Direct pipe

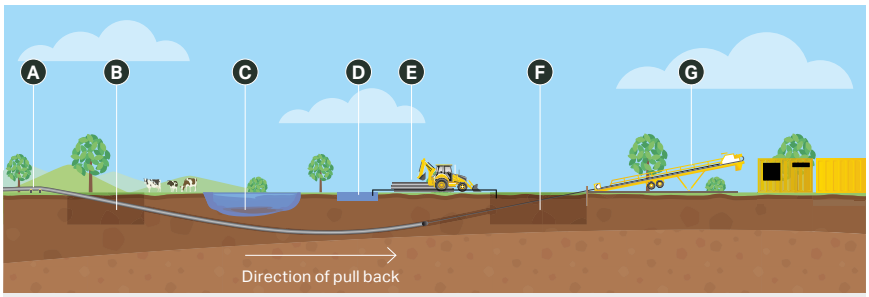
Direct pipe can be applied to longer trenchless crossings. This technique is similar in its method and set up to micro-tunnelling. However, the pipeline is installed directly into the ground behind the cutting / tunnelling machine, rather than the pipeline being installed inside another pipe tunnel.



A. Reception pit
B. Watercourse (or road, rail crossing etc.)
C. Material storage
D. Entry pit
E. Direct pipe

Horizontal Directional Drilling (HDD)

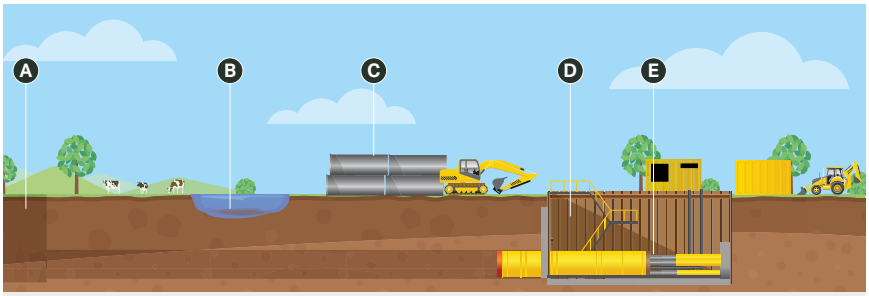
HDD is typically used on long trenchless crossings. It requires an entry and exit pit on either side of the crossing. A hole is then drilled beneath the crossing and the hydrogen pipe pulled back through the drilled tunnel.



A. Pre-assembled pipe section pulled through
B. Reception pit
C. Watercourse (or road, rail crossing etc.)
D. Cuttings settlement pit
E. Material storage
F. Entry pit
G. Horizontal Directional Drilling (HDD) rig

Micro-tunnelling

Micro-tunnelling is especially useful for laying pipelines beneath motorways, large roads, railway lines and other sensitive areas.
A cutting tool / tunnelling machine provides the mechanical excavation, which is generally controlled remotely above ground. Individual tunnel pipes (not the hydrogen pipe) are installed behind the tunnel machine as it makes progress. Once the tunnel pipe is in place the hydrogen pipeline pipes are lowered into the tunnel where they follow the same strict quality inspections before being pushed into the tunnel pipe. This continues until the hydrogen pipe is fully inserted. Connecting sections of pipe are then installed to connect this tunnel section to the sections of pipeline either side. The tunnel is then filled with a grout between the outside of the hydrogen pipe and the inside of the tunnel pipe.



A. Reception pit
B. Watercourse (or road, rail crossing etc.)
C. Material storage
D. Entry pit
E. Micro-tunnelling

These graphics are for indicative purposes only and not to scale.

Work on roads

We will continue to survey the areas where construction may take place and work closely with local highway authorities to ensure that any roads we plan to use for construction are suitable and safe for all road users.

If the proposals are approved, we may carry out improvements to bring certain roads up to the required standard for construction traffic. Where necessary, this could include small-scale road widening or temporary traffic management measures.

Landowners

The land agent team on H2East Pipeline: Humber to Nottinghamshire is Fisher German LLP. Fisher German is a specialist property consultant providing land agency services in connection with this Project.

As part of the Development Consent Order (DCO) application process we need to identify affected parties - anyone who owns or has an interest in land affected by the proposals. Fisher German will be identifying and contacting affected parties, arranging survey access and be the point of contact throughout the DCO process.

In the future, where land rights are required by Cadent, agreements will be prepared and offered with payments made for providing land rights, along with any appropriate compensation.

If we are granted development consent, this would include compulsory purchase powers. Our objective is to secure land right agreements voluntarily with land owners and we would only use compulsory purchase powers where necessary.

Contact us:

If you are a landowner, occupier or person with an interest in land and would like to get in touch with Fisher German, contact details are below:

Send an email to:
humbertonotts@fishergerman.co.uk

Call us on: **0800 65 22 101**

Consultation

We want to hear what you think

The local communities of Humber, Lincolnshire and Nottinghamshire along with landowners, elected representatives and other stakeholders will play a vital role in the development of the H2East Pipeline: Humber to Nottinghamshire Project. Your views will help shape and refine the final pipeline route.

We need your local knowledge and welcome any feedback you may have on our proposals. Your insights are valuable to help us to identify and understand any potential impacts the Project may create. If you have any ideas on how the impacts could be reduced we would like to hear this as well.

The plans are in the early stages of development and we are seeking your views to support us in defining the location of the route corridor. The route corridor identifies a broad area in which the pipeline will be constructed and finally placed.

Any feedback you share on our proposals will be reviewed, recorded and carefully considered as we further develop our plans.

You can share your views by:

- Visiting the project website: **www.h2east.co.uk**
- Sending an email to: **humbertonotts@h2east.co.uk**
- Write to us: **FREEPOST H2 EAST HN** (you do not need to use a stamp)
- **Paper feedback forms:** These are available to download on **www.h2east.co.uk** and on request by emailing or writing to Freepost H2 EAST HN
- **Attending a consultation event**

The consultation will run for six weeks from midday on Tuesday 3rd March 2026 until 23:59 on Tuesday 14th April 2026.

Consultation documents

We have published two reports at this consultation – the Scoping Report and Design Evolution Report.

Both reports are available at **www. h2east.co.uk**

Scoping Report

The Scoping Report is a key document which we complete early in the Environmental Impact Assessment (EIA) process. It is a technical document that sets out what environmental topics and potential impacts should be assessed in detail for a proposed hydrogen pipeline considered to be a Nationally Significant Infrastructure Project.

Nationally Significant Infrastructure Projects have a specific planning process that must be undertaken to gain the legal permits, or consent, to construct and operate. Further information on this process is provided on page 12.

The Planning Inspectorate is running a consultation on our Scoping Report. The Planning Inspectorate will contact a range of prescribed stakeholders to invite them to have their say on this Report.

This consultation is separate to the consultation being undertaken by Cadent on its early proposals for the Project.

Responses to both consultations will be considered together as we progress the preparation of our design and proposals.

Design Evolution Report

The Design Evolution Report (DER) is a document which explains how the Project has evolved and what has been considered so far in its design. The DER explains the decisions made so far on the Project which have resulted in the selection of preferred route corridor. It shows the decision-making journey from early concept to what is being presented at the consultation. It will be updated following the consultation with a final version which will be submitted with our planning application.

Have your say

Join us at an event	What three words	Date	Time
Bert Boyden Community Centre Bert Boyden Community Centre, 34 Carver Rd, Immingham, DN40 1DS	microfilm.trap.original	Monday 9 March	2-6pm
Wrawby Village Hall Wrawby Village Hall, Vicarage Gardens, Wrawby, Brigg, DN20 8SA	yesterday.cascaded.songs	Tuesday 10 March	2-5pm
Grange Farm Community Centre Grange Farm Community Centre, Wesley Rd, Scunthorpe, DN16 1SA	loops.years.bought	Monday 16 March	9am-12pm
Blyton Memorial Hall Blyton Memorial Hall, Church Ln, Blyton, Gainsborough, DN21 3JZ	clearcut.valley.cropping	Tuesday 17 March	2:30-6:30pm
Messingham Village Hall Messingham Village Hall, Wendover Cl, Messingham, Scunthorpe, DN17 3TS	workouts.developer.clutches	Friday 20 March	1:30-4:30pm
South Clifton Coronation Hall South Clifton Coronation Hall, Moor Ln, South Clifton, Newark, NG23 7AN	defends.sketch.drummers	Saturday 21 March	9am-12pm
Egmanton Village Hall Egmanton Village Hall, Old School House, Tuxford Rd, Egmanton, NG22 0HA	approve.absorbing.deal	Saturday 21 March	2-6pm
Willingham Village Hall Willingham Village Hall, Willingham by Stow, Lincoln, DN21 5JZ	replaces.stealthier.vans	Monday 23 March	2-5pm
Norwell Village Hall Norwell Village Hall, Norwell, Newark, NG23 6JN	trinkets.bandage.local	Wednesday 25 March	12-3pm
South Muskham and Little Carlton Village Hall South Muskham and Little Carlton Village Hall, Main St, South Muskham, Newark, NG23 6EE	almost.exclaim.cabs	Wednesday 25 March	5-8pm
Online Webinar: Register at **www.h2east.co.uk – Share your Views** using the link.		Thursday 19 March	6-7pm

Information points

Consultation documents will be available to view at the following information points in the vicinity of the Project.

Venue	Address	Opening times
Gainsborough Library	Cobden Street, Gainsborough, DN21 2NG	Monday - Wednesday: 9am-5pm Thursday: 9am-6pm Friday: 9am-5pm Saturday: 9am-1pm Sunday: Closed
Saxilby Library	St Andrews Centre, William Street, Saxilby, LN1 2LP	Monday: Closed Tuesday: 10.30am-4pm Wednesday - Friday: 10.30am-1pm Saturday and Sunday: Closed
The Museum of the Horse (Tuxford)	Market Place, Tuxford, Newark, NG22 0LA	Monday - Friday: 9.30am-4pm Saturday: 9.30am-1.30pm Sunday: Closed
Newark Library	Beaumond Gardens, Balderton Gate, Newark, NG24 1UW	Monday and Wednesday: 9am-6.30pm Tuesday, Thursday and Friday: 9am-6pm Saturday: 9am-4pm Sunday: Closed
Ollerton Library	Forest Road, New Ollerton, Newark, NG22 9PL	Monday and Friday: 9am-1pm and 1.30pm-5.30pm Tuesday: 9am-1pm Wednesday: 2pm-5.30pm Thursday: Closed Saturday: 9am-12.30pm Sunday: Closed
Immingham Library	Pelham Road, Immingham, DN40 1QF	Monday - Friday: 9am-5pm Saturday: 9am-1pm Sunday: Closed
Grimsby Library	31 Baxtergate, Freshney Place, Grimsby, DN31 1QL	Monday: Closed Tuesday - Friday: 8:30am-5:30pm Saturday: 9am-1pm
Brigg Library	The Angel, Market Place, Brigg, DN20 8LD	Monday - Friday: 9am-5pm Saturday: 9am-12pm Sunday: Closed
Scunthorpe Central Library	Carlton Street, Scunthorpe, North Lincolnshire, DN15 6TX	Monday - Friday: 9am-5pm Saturday: 9am-1pm Sunday: Closed
Kirton in Lindsey Library	20 King Edward Street, Kirton-in-Lindsey, Gainsborough, DN21 4NQ	Monday: Closed Tuesday: 12.30pm-5pm Wednesday: 11am-5pm Thursday: Closed Friday: 9.30am-3.30pm Saturday: 10am-1pm Sunday: Closed

Please note opening hours may be subject to change.

If you would prefer to receive printed copies by post, please contact us with the documents you would like to receive. As requests can vary, a charge may apply in some cases up to a maximum of £100.

The deadline for feedback on our proposals is 23:59 on Tuesday 14th April 2026.

Next steps

Your feedback will help us shape our plans as we develop our proposals. We will continue discussions with landowners and stakeholders throughout the process. We will be undertaking surveys as well as technical and environmental assessments along the proposed route to develop and inform our plans ahead of submitting our application for development consent in 2028.

What's happening?

January
2026
Project launch

January to June
2026
Consultation and environmental impact assessment (EIA) scoping

June onwards
2026
Field surveys, scheme design and EIA assessment

Autumn 2026 and 2027
2026/27
Further engagement on early findings, mitigation and engineering work design

2028
DCO submission anticipated

Contact us

Email:
humbertonotts@h2east.co.uk

Call us on: **0800 188 4479**

Write to us:
FREEPOST H2 EAST HN

Register to stay informed:
www.h2east.co.uk

Confidential support

Cadent
Your Gas Network

shout
85258

Cadent has partnered with Shout to offer support to members of all communities that may be affected by the proposed H_2East Pipeline: Humber to Nottinghamshire Project.

Shout is an independent 24/7 text support service for anyone in the UK experiencing concerns regarding their mental health.

To access the SHOUT service, text '**PIPELINE**' to **85258** for free and confidential support, 24/7.